

Work Order ID 100948***100948***

Page 1

May-01-13 7:09:17 AM

Item ID: D3901-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bar

Start Date: 4/26/13 Start Qty: 12.00

12

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MLJDate: 1305-03

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3901	E

100	0.00
-----	------

100

Cold Saw

Hyd Mech

Memo 0.00

Cut blanks at 67.50"

ZET 13-05-22

110

110

HAAS 1

HAAS CNC vertical machine #1

Memo 0.00

1-Mill as per folio FB090 & dwg D3901,

FOLIO REV: AADWG REV: F

2-Deburr as required

D-2 13|05|24

12 ♂

DAS
08
-88

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending		Bend		Grain		Ovalized		Pressure/Forced			
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure			
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld			
Crushed/Crimped		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled			
Cuffs		Contamination		Maintenance		Part Moved					
Heat Treat		Countersink		Mislabeled		Positioned Wrong					
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge					
Ripples in Bend		Drill Holes		Offset							
Torque Waves in Extrusion		Drawing		Out of Calibration							
Turning Sequence		Finish		Out of Sequence							
Wave/Twist in Tube		Folio		Outside Dimensions							

Work Order ID 100948***100948***

Page 2

May-01-13 7:09:17 AM

Item ID:	D3901-3	Accept	*N900040100*	Setup	Start	*NS1*	
Revision ID:				Stop		*NS2*	
Item Name:	Bar						
Start Date:	4/26/13	Start Qty:	12.00	*12*	Cust Item ID:		
Required Date:	4/30/13	Req'd Qty:	12.00	*12*	Customer:		
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB	0.00							DAS 08 9-89
	Memo	0.00	DA	13/05/24		12	0		
	EXTRA MATERIAL WILL BE CUT ON ASSEMBLY								
130 *130* QC Quality Control	QC8- Inspect parts - second check	0.00							OK 13/05/25 12 0
	Memo	0.00							
	EXTRA MATERIAL WILL BE CUT ON ASSEMBLY								
140 *140* Packaging Packaging	Identify as per dwg & Stock Location: <u>WA001</u>	0.00							x12 13-05-27 MAL
	Memo	0.00							

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS														
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Part No. _____			Work Order Update <input type="checkbox"/>																	
NCR No. _____																				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description			Sign & Date	Verification		QC Inspector							
Doc/Data																				
Equip/Tooling																				
Operator																				
Material																				
Setup																				
Other																				
Process																				
Supplier																				
Training																				
Unapproved																				
FAULT CATEGORY																				
Landing Gear				General																
Bending		Bend		Grain		Ovalized		Pressure/Forced		Temperature/Cure		Weld		Wrong Stock Pulled						
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance														
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect														
Crushed/Crimped		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing														
Cuffs		Contamination		Maintenance		Part Moved														
Heat Treat		Countersink		Mislabeled		Positioned Wrong														
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge														
Ripples in Bend		Drill Holes		Offset		Other														
Torque Waves in Extrusion		Drawing		Out of Calibration																
Turning Sequence		Finish		Out of Sequence																
Wave/Twist in Tube		Folio		Outside Dimensions																

Work Order ID 100948

100948

Page 3

May-01-13 7:09:17 AM

Item ID: D3901-3

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Bar

Start Date: 4/26/13

Start Qty: 12.00

12

Cust Item ID:

Required Date: 4/30/13

Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

13/5/21 48

Quality Control

4/13-07-25

NCR: Yes / No

DQA: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS														
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Part No. _____			Work Order Update <input type="checkbox"/>																	
NCR No. _____																				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description			Sign & Date	Verification		QC Inspector							
Doc/Data																				
Equip/Tooling																				
Operator																				
Material																				
Setup																				
Other																				
Process																				
Supplier																				
Training																				
Unapproved																				
FAULT CATEGORY																				
Landing Gear				General																
Bending	Bend	Grain	Ovalized	Pressure/Forced																
Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure																
Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld																
Crushed/Crimped	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled																
Cuffs	Contamination	Maintenance	Part Moved																	
Heat Treat	Countersink	Mislabeled	Positioned Wrong																	
Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge																	
Ripples in Bend	Drill Holes	Offset	Other																	
Torque Waves in Extrusion	Drawing	Out of Calibration																		
Turning Sequence	Finish	Out of Sequence																		
Wave/Twist in Tube	Folio	Outside Dimensions																		

Picklist Print

May-01-13 7:09:17 AM

Page 1

Work Order ID: 100948

Parent Item: D3901-3

Parent Item Name: Bar

Start Date: 4/26/13

Required Date: 4/30/13

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP RevA: New issue DD verified by:EC
verified by:JLM

IPP RevB: Now on cnc JFS 12/02/13

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.250x0.500 304 BAR .250 x .500		Purchased	No			100	f	482.3470	5.573	70.39579			

Location	Loc Qty	Loc Code
MAT049	482.347	
123902	31.492	
124518	222.855	
<u>125367</u>	228	<u>x72</u>

BT 13-09-22

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other							
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled							

4
D
DRAFT COPY

REFERS TO

ENGINEERING

UNSEARCHED COPY

SEARCHED DOCUMENT

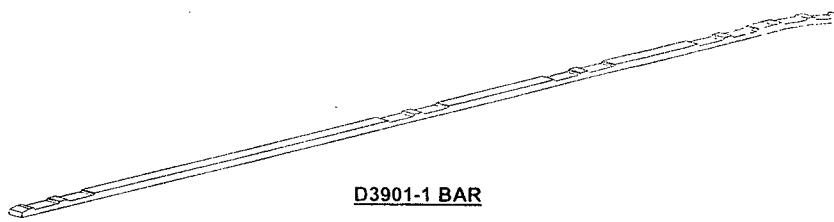
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FILED

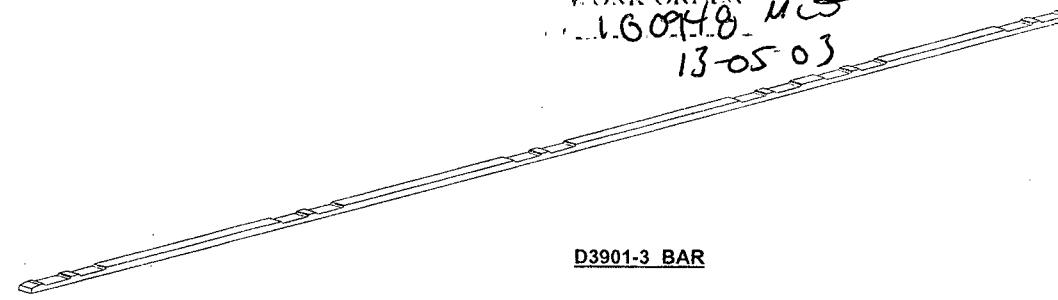
W/C&K ORDER

1.60948 MC

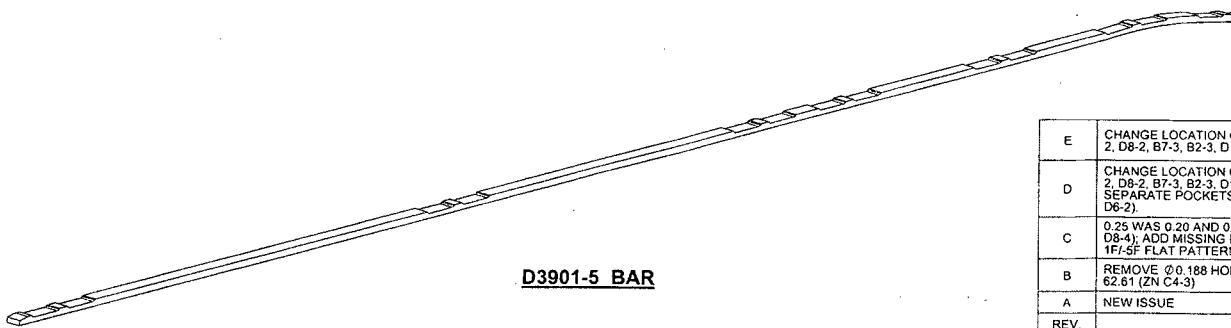
13-05-03



D3901-1 BAR



D3901-3 BAR



D3901-5 BAR

RELEASED
2012-09-04
M

E	CHANGE LOCATION OF END POCKETS ON -1/-3/-5 (ZN B1-2, D8-2, B7-3, B2-3, D1-4, D7-4)	DC	12.08.23
D	CHANGE LOCATION OF END POCKETS ON -1/-3/-5 (ZN D1-2, D8-2, B7-3, B2-3, D1-4, D8-4). SPREAD POCKETS INTO TWO SEPARATE POCKETS (ZN A2-2). ADD POCKET TO -1 (ZN D6-2).	DC	12.08.21
C	0.25 WAS 0.20 AND 0.130 WAS 0.080 (ZN B2-2, B1-2, B1-3, D8-4); ADD MISSING DIMENSIONS (ZN C5-3); ADD D3901-1F/5F FLAT PATTERN	RF	12.01.24
B	REMOVE Ø0.188 HOLES FROM D3901-1/-3/-5; 62.12 WAS 62.61 (ZN C4-3)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	DC	KENT, WA	
CHECKED	BB	DRAWING NO.	REV. E,
MFG. APPR.	SH	D3901	SHEET 1 OF 4
APPROVED	MP	TITLE	SCALE
DE APPR.	MM	BAR	NTS
DATE	12.08.23	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8

7

6

5

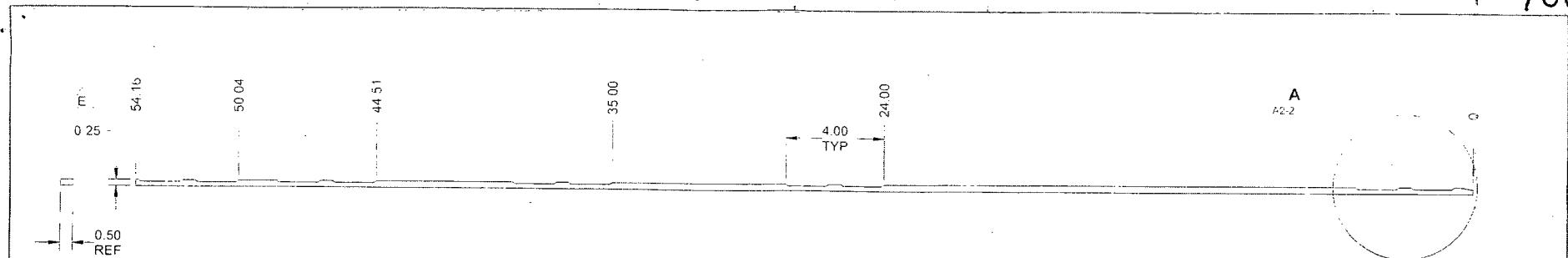
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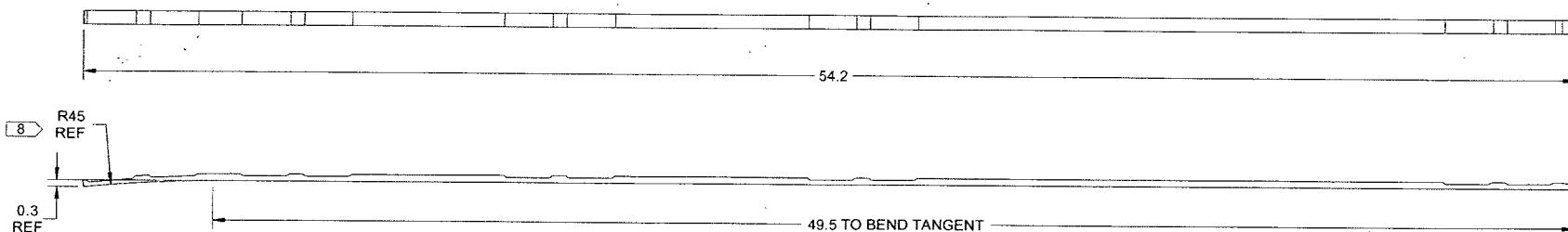
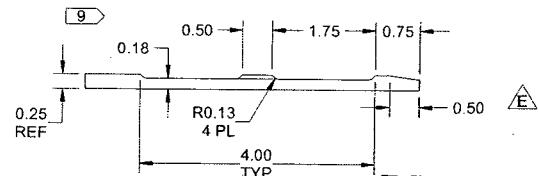
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1

100948



D3901-1F BAR FLAT PATTERN

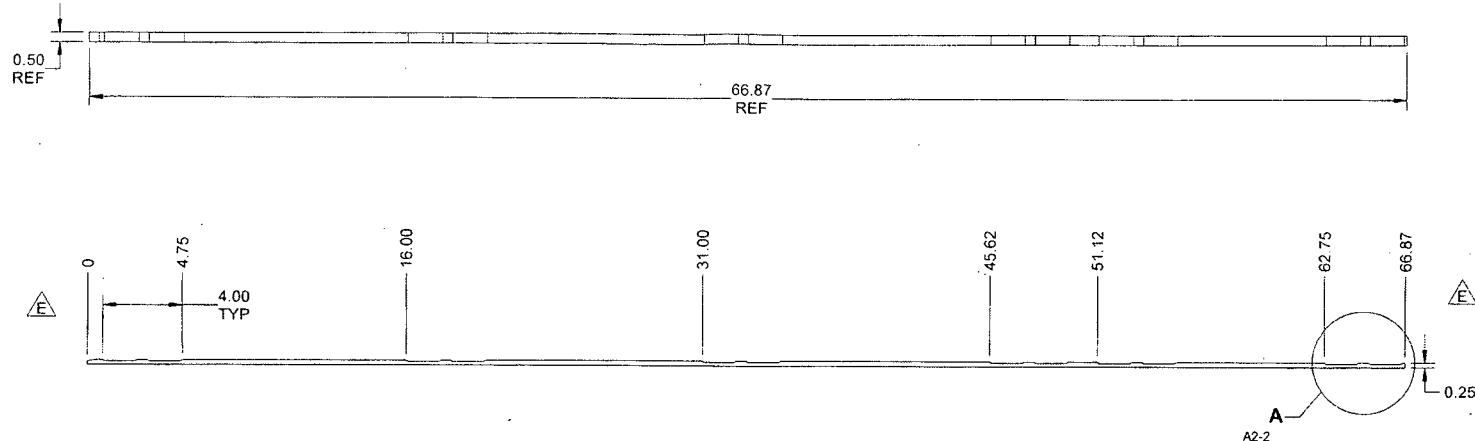
D3901-1 BAR
(MAKE FROM D3901-1F)DETAIL A
D1-2
TYP
D1-3
D1-4RELEASED
2012-09-06
JW

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.78 lbs
- 8) FORM TO FIT WEARPLATE
- 9) ANGLE TO BE DETERMINED BY AVAILABLE TOOLING

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA
DRAWN	SC	DRAWING NO.
CHECKED	AS	REV. E
MFG. APPR.	SH	SHEET 2 OF 4
APPROVED	140	TITLE
DE APPR.	140	SCALE
DATE	12.08.23	NTS

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D3901-3 BAR

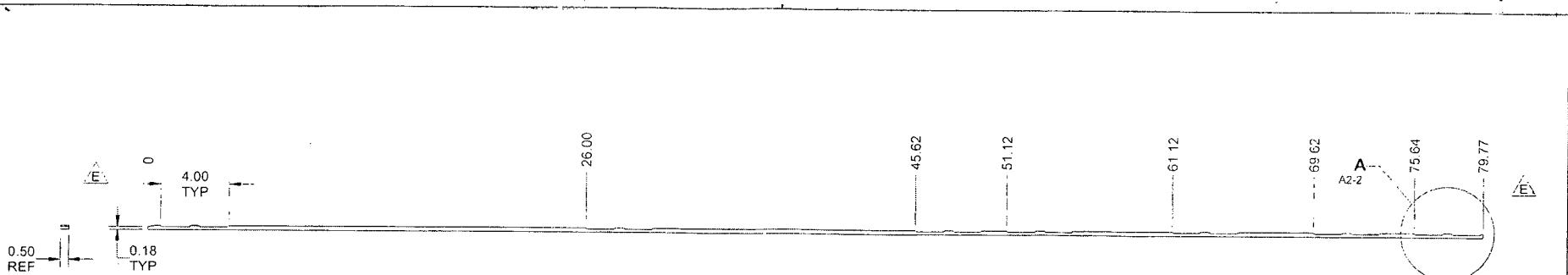
RELEASED
2012-09-04
M

NOTES:

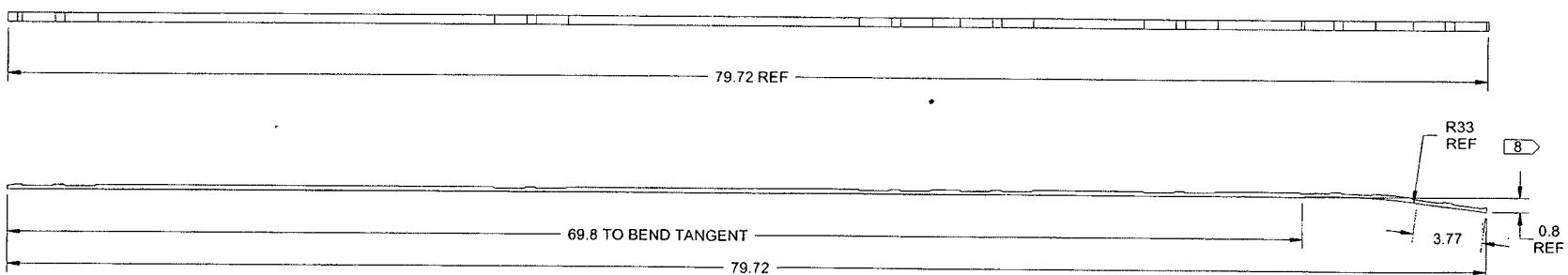
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK-SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.21 lbs

DESIGN	RF	DART AEROSPACE USA, INC.
DRAWN	SC	KENT, WA
CHECKED	BS	DRAWING NO.
MFG. APPR.	SH	D3901
APPROVED	149	REV. E
DE'APPR.	SH	SHEET 3 OF 4
DATE	12.08.23	SCALE
		NTS
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8 7 6 5 4 3 2 1



D3901-5F BAR FLAT PATTERN

D3901-5 BAR
(MAKE FROM D3901-5F)RELEASED
2012-09-04
JM

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.63 lbs
- 8) FORM TO FIT WEARPLATE

DESIGN DRAWN	RF	DART AEROSPACE USA, INC. KENT, WA
CHECKED	RE	DRAWING NO. D3901
MFG. APPR.	SI	REV. E SHEET 4 OF 4
APPROVED	100	SCALE NTS
DE-APPR.	100	TITLE BAR
DATE	12.08.23	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

8 7 6 5 4 3 2 1

DART AEROSPACE LTD	Work Order:
Description: <u>KAR</u>	Part Number: <u>D3901-3</u>
Inspection Dwg: <u>D390</u> Rev: <u>E</u>	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	M.A	08 9-89	AAS
Date:	13/05/24	9-89	AAS

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15